

Comprehensive Bicycle Plan

FOR THE
WICHITA
METROPOLITAN AREA

APRIL, 1989

COMPREHENSIVE BICYCLE PLAN
FOR THE
WICHITA METROPOLITAN AREA

Reviewed, Amended and Approved By
The Bicycle Task Force

Prepared By
The Wichita-Sedgwick County
Metropolitan Area Planning Department

In Cooperation With
Wichita Department of Public Works
Wichita Police Department
Wichita Park Department

April 1989

BICYCLE TASK FORCE

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Preface

On September 29, **1987**, the Wichita City Council authorized the formation of an ad **hoc** task force to work with City Staff in the **development** of a comprehensive bicycle plan for the City of Wichita. The Bicycle Task Force, which was given a suggested time frame of one year by the City Manager to fulfill its task, was asked to develop recommendations pertaining to bicycle paths and routes, bicycle safety and enforcement, a viable means of bicycle registration and the development of a public relations/education program for bicycle riders. To this end, the Comprehensive Bicycle Plan has been developed.

All interested citizens are invited and encouraged to make comments on the plan to the **Wichita-Sedgwick** County Metropolitan Area Planning Department, Tenth Floor. City Hall, 455 North Main, Wichita, KS **67202**. The phone number is **316-268-4391**.

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Preface

On September **29, 1987**, the Wichita City Council authorized the formation of an ad **hoc** task force to work with City Staff in the **development** of a comprehensive bicycle plan for the City of Wichita. The Bicycle Task Force, which was given a suggested time frame of one year by the City Manager to fulfill its task, was asked to develop recommendations pertaining to bicycle paths and routes, bicycle safety and enforcement, a viable means of bicycle registration and the development of a public relations/education program for bicycle riders. To this end, the Comprehensive Bicycle Plan has been developed.

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PRIORITY RECOMMENDATIONS

1. UPGRADE AND MAINTAIN THE **EXISTING BICYCLE FACILITIES**.
2. EXPAND THE BIKEWAY SYSTEM WITH NEW TRAILS, EXTENSIONS AND IMPROVEMENTS:
 - **K-96/NE EXPRESSWAY**
 - **13TH STREET BRIDGE**
 - **21ST STREET/ZOO**
 - **CESSNA PARK**
 - **FLOODWAY**
3. IMPLEMENT A CHILD ENFORCEMENT PROGRAM THAT WOULD **NOTIFY** PARENTS BY MAIL OF VIOLATIONS.
4. IMPLEMENT A CHILDREN'S SAFETY PROGRAM TO ENCOURAGE THE USE OF SAFETY FLAGS FOR GREATER VISIBILITY.
5. IMPROVE THE EFFECTIVENESS OF THE ONE-TIME REGISTRATION SYSTEM THROUGH POLICE VISITS AND REMINDER LETTERS TO BIKE RETAILERS.
6. THE CITY SHOULD TAKE AN ACTIVE ROLE IN ENCOURAGING BICYCLE EVENTS SUCH AS BICYCLE RACES. TOURS AND FESTIVALS.
7. DISTRIBUTE EDUCATIONAL AND SAFETY LITERATURE (INCLUDING MAP) AT TIME OF BICYCLE REGISTRATION.

EXECUTIVE SUMMARY
of the
Comprehensive Bicycle Plan
for the
Wichita Metropolitan Area

April 1989

In 1987, the Wichita City Council determined that there should be a comprehensive bicycle plan for the **Wichita** Metropolitan Area. No such document previously existed, although there had been other **documents** that covered bicycling as a **minor part** (i.e., Toward a More Livable City, A Guide to the Comprehensive Plan, and the Park and Open Space Plan) or that dealt with specific bikeway projects (i.e., the Canal Route Corridor Study and the CBD Bikeway Demonstration Evaluation). The most recent document was developed in 1980, which presented a general guide to bicycling (i.e., Guide to Bikeway Development).

An ad **hoc** task force was appointed in late 1987 and assigned the responsibility of developing a comprehensive bicycle plan for Wichita. Members of this Task Force include: Larry Ross (Chair), Joan Armstrong, Maurice Coulson, David Doctor, Charles Eby, **Kim Grant**, Frances Jackson, **Suzan McNett**, Gene Moninger (Vice-Chair), and Ann Starch. Staff support is provided by four city departments: Planning (lead role), Engineering, Police and Park.

During the first several months of 1988, the Task Force met twice a month, obtaining input from and discussing bicycle issues with the City Engineer, County Engineer, Park Director, Coordinator of the Police-School Liaison Program, the Deputy City Treasurer, the Senior Vice-president of **Economic** Development for the Wichita Chamber of Commerce and many others. Then the task of actually drafting a plan began. By September, a preliminary draft document was developed. After two months of review, the Task Force accepted a draft plan which then went to the **community** for review and comment. Following that, various revisions were made in response to the public comments and a final report was approved by the Bicycle Task Force. It is **recommended** that this plan be reviewed on a five-year basis.

The plan covers a wide spectrum of bicycle issues, including new bikeway development, suggestions for improved safety, education, enforcement, encouragement, bicycle registration and other regulations. Efforts were made to consider the needs of various types of bicycle riders, including children, adult recreationalists and expert enthusiasts.

The following summarizes the recommendations presented in the plan. The recommendations considered to be of highest priority are capitalized.

RECOMMENDATIONS

Engineering

- REPAIR THE EXISTING BICYCLE FACILITIES TO BRING THEM UP TO ACCEPTABLE STANDARDS.

	<u>Estimated Cost</u>
River Trail	\$46.640
Canal Route	14.680
CBD Bikeway	1.600
General Cleaning	1.250
Safety Skills Course	<u>1.000</u>
Total	\$65,170

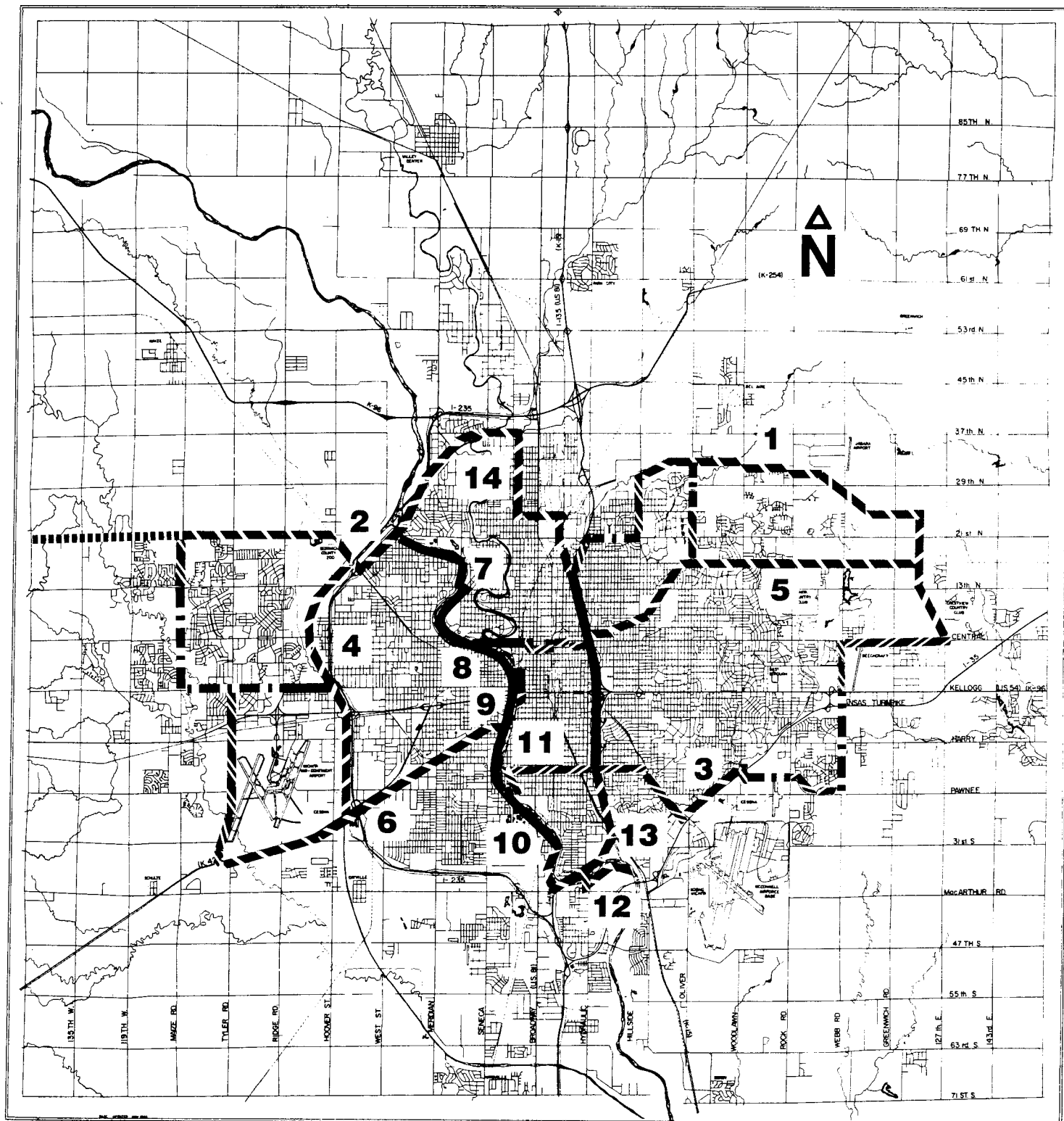
INCREASE THE ANNUAL MAINTENANCE AND REPAIR OF EXISTING BICYCLE FACILITIES TO \$12.000 (IT CURRENTLY COSTS \$7.000 PER YEAR).

- EXPAND THE BIKEWAY SYSTEM WITH NEW TRAILS. EXTENSIONS AND IMPROVEMENTS. AS INDICATED ON MAP 1 AND TABLES 1 AND 2.
- Consider the needs and safety of bicyclists when designing, building and reconstructing roads and bridges. Recommended road improvements include wider bridges, wide curb lanes, paved shoulders, cleaner streets, smoother road surfaces, and wider sidewalks.
- Within the next two years, assess the existing on-street system to determine new routes and evaluate arterial connections.
- Rename the Arkansas River Path and the Canal Bike Trail to the "Arkansas River Bike Trail" and the "**Chisholm** Creek Bike Trail." Signs should be replaced as needed for identification purposes.
- Railroad right-of-way should always be considered for possible bicycle and recreational trail uses.
- River corridor paths are favorable and should be added whenever possible.
- AASHTO Guidelines should be used in designing and constructing bicycle paths.

MAP 1

PROPOSED BIKEWAY SYSTEM

(WITH NUMBERED PROJECTS AND CONNECTING ROAD IMPROVEMENTS)



LEGEND

- Existing Bicycle Paths
- Proposed Bicycle Paths
- CIP Projects
- Possible Connections
- Paved Shoulders

TABLE 1
BIKEWAY IMPROVEMENT SUMMARY

<u>Index & ID Number</u>	<u>Name</u>	<u>Length</u>	<u>Type</u>	<u>Cost</u>
1	Northeast Expressway	8.0 mi.	Bike Path	\$604,000
2	21st Street/Zoo Path	4.5 mi.	Bike Path	\$415,000
3	Cessna Park	1.5 mi.	Bike Path	\$141,000
4	Floodway	5.0 mi.	Bike Path	\$384,000
5	Burlington-Northern RR	7.0 mi.	Bike Path	\$529,000
6	Santa Fe RR	6.0 mi.	Bike Path	\$453,000
7	13th St. Bridge		Underpass & Wider Sidewalks	*
8	Seneca St. Bridge		Wider Curve & Curb Cuts	*
9	Lewis St. Bridge		Wider Curve & Signing	*
10	Watson Park		Signing & Entrance	*
11	East Bank	0.5 mi.	Bike Path	\$28,000
12	South River Trail	2.0 mi.	Bike Path	\$151,000
13	Southern Connection	3.3 mi.	Bike Path	\$247,000
14	Northern Connection	6.4 mi.	Bike Path	\$481,000
TOTAL:		44.2 mi.		\$3,433,000

* Low cost bikeway improvements

TABLE 2
RECOMMENDED IMPLEMENTATION/FUNDING SCHEDULE
FOR PROPOSED BIKEWAY PROJECTS

SALES TAX

NE Expressway • City*	\$340,000
NE Expressway • County *	<u>264,000</u>
	\$604,000

* Construction dates for the bike path
should coincide with that of the expressway.

GENERAL FUND

Year 1

Repair Existing Bike Facilities	\$ 65,000
21st Street (River to Windmill)	<u>134,000</u>
	\$199,000

Year 2

21st Street (Windmill to Ridge)	\$130,000
21st Street (Ridge to Maize)	<u>151,000</u>
	\$281,000

Year 3

Cessna Park	\$141,000
Floodway (Zoo to Central)	<u>110,000</u>
	\$251,000

Year 4

Floodway (Central to Maple)	\$ 75,000
Floodway (Maple to K-42)	<u>199,000</u>
	\$274,000

Other bikeway projects listed in **Table 1** should be considered as right-of-way becomes available (i.e., Burlington-Northern Railroad and Santa Fe Railroad) or as other events occur to make the projects feasible (i.e., East Bank). Bikeway **improvements** on bridges should occur when the bridges are scheduled for reconstruction.

Regulations

- Regularly review Wichita's Bicycle Ordinance (**i.e.**, every five years) and update as necessary.

Registration

- IMPROVE THE EFFECTIVENESS OF THE ONE-TIME REGISTRATION SYSTEM THROUGH POLICE VISITS AND REMINDER LETTERS TO BIKE RETAILERS.
- Continue with the one-time registration system.
- Continue sharing the registration fee with the bicycle retailers to encourage their cooperation and to partly cover their costs.
- Earmark the City's portion of the registration fee for specific or general bicycle programs.
- Establish a Bicycle Board (appointed by the City Council) to oversee the spending of the bicycle registration fund and to provide direction on trail priorities.
- Consider increasing the registration fee from \$3 to as much as \$5.

Enforcement

- IMPLEMENT A SPECIAL CHILDREN'S BICYCLE ENFORCEMENT PROGRAM IN WHICH ALL VIOLATORS UNDER THE AGE OF 14 (WHO CANNOT BE ISSUED POLICE CITATIONS) HAVE SPECIAL NOTICES MAILED TO THEIR PARENTS INFORMING THEM OF THE VIOLATIONS.
- Increase issuance of police citations to adult violators of bicycle laws.
- Consider allowing verbal "warnings" or "**defect** tickets" for some bicycle violations, such as equipment or registration.

Safety

Better bicycle facilities, improved road design, increased education and greater enforcement will all help improve safety. In addition, the following **recommendations** are made:

- ENCOURAGE THE USE OF BICYCLE SAFETY **FLAGS** FOR CHILDREN TO INCREASE THEIR **VISIBILITY** TO MOTORISTS.

Encourage children not to ride on busy streets, on high-speed streets or at night. Emphasize this in any literature distributed to parents.

Teach children to always stop before leaving the driveway and **entering** the street. (Common cause of accidents.)

- Encourage more frequent use of better bike lights at night (for both children and adults).

Encourage the State to revise the State Vehicle Code so that all motor vehicles would be required to have their lights on at and between sunset and sunrise rather than 30 minutes after sunset and 30 **minutes** before sunrise.

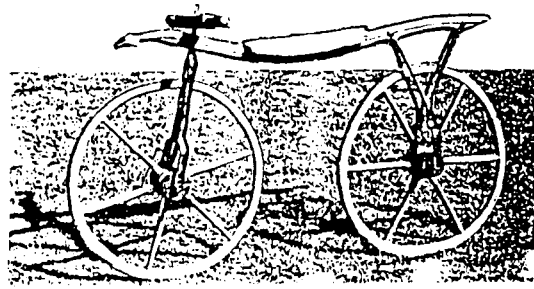
Education

- PROVIDE BICYCLE SAFETY EDUCATION MATERIAL (INCLUDING MAP) AT THE TIME OF BICYCLE REGISTRATION.
- Provide parental guidance on bicycle safety education by distributing literature to *parents* at the time of enrollment—preferably at the level of kindergarten or first grade.
- Support the Wichita Police-School Liaison's efforts in bicycle education by providing them with current, relevant teaching aids.
- Improve and expand the Summer Bicycle Clinic as needed to meet the demand.
- Encourage coordination between the City and County bicycle education programs to enhance each others efforts.
- Encourage private support from local bicycle clubs, bicycle shops and civic organizations. Support activities could include bicycle rodeos, safety checks, or basic bicycle maintenance at special events such as the River Festival.
- Continue updating and distributing the Wichita Bicycle Maps if adequate funds are available.
- Encourage the Wichita School System to make bicycle education a higher priority, perhaps by incorporating bicycle education in physical education classes or expanding the efforts of the Police-School Liaison Office.
- Encourage the Kansas Department of Motor **Vehicles** to give more attention to bicycle safety in the driver's **manual**, driver's license examinations **and/or** driver's education classes.

Encouragement

- COOPERATE WITH THE PRIVATE SECTOR IN SPONSORING VARIOUS BICYCLE EVENTS, SUCH AS ROAD RACES, TOURS, RODEOS AND FESTIVALS.
- Within the City structure, perhaps the Park Department. designate a bicycle coordinator to work with the **community** in encouraging bicycling.
- Encourage bicycle organizations. such as the **Oz Bicycle Club**, to take an even more active role in bicycle encouragement within the community.
- Provide adequate bicycle parking at all public facilities and encourage the private sector to provide bicycle parking at local businesses.
- Encourage the Park Department to offer adult and teenage bicycle classesl tours.

I. INTRODUCTION



Hobby Horse. circa 1816

Over the years, bicycle planning has taken on a new importance because of the growing popularity of bicycling and the resulting demand for facilities. Bicycling can no longer be considered just an activity for children. It has become a very serious and popular form of adult recreation and exercise as well as a low-cost, efficient means of transportation for both young and old alike. In addition, there is a growing awareness that providing the general public with adequate bicycle facilities, programs and opportunities represents an important component of efforts to improve the quality of life in our community.

With its growing popularity, bicycling now encompasses a wide spectrum of participants with varying degrees of skill, knowledge, interests and needs. It is important to recognize and understand these differences so that a plan can be developed that provides a responsive mix of safety, education, enforcement and engineering proposals.

In general, bicyclists can be categorized into three groups: the child bicyclist, the average or casual adult bicyclist and the expert adult bicyclist. These are briefly described below:

1. The child bicyclist is not old enough to have a driver's license and, in Wichita, children under 14 years of age cannot be issued a citation for violations. This group generally lacks the experience, training and judgment to deal effectively with on-street conditions. They tend to ride on sidewalks, playgrounds, driveways and residential streets near their homes.
2. The casual adult bicyclist generally prefers to ride on residential streets and exclusive bike paths. Most of the bicycling in this group is recreational. These bicyclists ride infrequently and may not be very skillful. Most of them possess a valid driver's license.
3. The expert adult bicyclist is part of a relatively small group of serious cyclists who have extensive bicycle knowledge and skill. Included in this group are bicycle commuters and touring bicyclists. These bicyclists tend to make longer trips, more frequent trips and more utilitarian trips than the average adult bicyclist.

Planning efforts need to address the concerns of all three groups. In general, the primary concern for children is safety and education. For the casual adult bicyclist, recreational bike paths are of primary interest. And for the expert adult cyclist, longer, more direct bike paths as well as improved road conditions may be the most beneficial.

In this plan, a number of issues have been addressed: bicycle regulations (including registration), enforcement, safety, education, encouragement and engineering. Throughout the planning process, an effort has been made to consider the needs of the individual participants as well as the impact on the community as a whole. It is hoped that the end result is a responsive, comprehensive plan that will encourage bicycling in a safe, enjoyable and cooperative atmosphere.

II. BACKGROUND AND HISTORY

Bikeway planning is not something entirely new to Wichita. This is evidenced by the existing River Path, the Canal Hike and Bike Trails, the Downtown Bikeway and the on-street bicycle system, all dating back to the 1970's. Included in this section is a brief description of the studies and plans that have addressed the needs of bicyclists in Wichita during the past eighteen years and have provided the historical foundation for the 1988/89 Comprehensive Bicycle Plan.

Toward a More Livable City: An Urban Beautification Plan for Wichita, Kansas. Wichita-Sedgwick County Metropolitan Area Planning Department. 1970.

Toward a More Livable City was the first planning document to specifically address the need for bicycling facilities in Wichita. This document, which was produced to supplement elements of the Comprehensive Plan, addressed beautification of the City. It included proposals for recreational hiking and biking trails for the Big and Little Arkansas River Corridors, the Wichita Floodway and the Canal Route Open Space Corridor. It also suggested that bikeways be included as part of any neighborhood development or subdivision design proposals in an effort to connect parks, schools, libraries and other activity centers.

A Guide to the Comprehensive Plan. Wichita-Sedgwick County Metropolitan Area Planning Department. 1974.

This document, which described the planning process in Wichita and summarized the then-current comprehensive plan, emphasized the importance of continued expansion of the bikeway system. It included a map of the proposed bike trail extension along the River, proposed trails along the Floodway, a detailed depiction of the Canal Route Corridor and the 1973 on-street bikeway system.

The Canal Route Corridor Study. Professional Engineering Consultants P.A. and Oblinger-Smith Corporation, 1974.

The proposal for a hike and bike trail system utilizing the I-135 Open Space Corridor was developed in considerable detail in the Canal Route Corridor Study. The report presented recommendations on construction materials, preliminary cost estimate, suggested phasing for implementation and proposed maintenance responsibilities for the completed project.

Wichita-Sedgwick County Park and Open Space Plan. Wichita-Sedgwick County Metropolitan Area Planning Department. 1976.

Bicycle trails continued to be emphasized in the Park and Open Space Plan as a vital recreational resource. Proposals called for bikeway development along the Floodway, the Cowskin Creek and continued development of the River Trails to the far north and south of the Big Arkansas River.

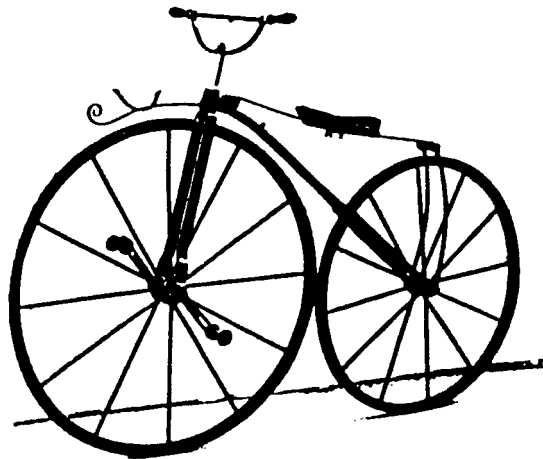
Bikeway Demonstration Evaluation for the City of Wichita, Wichita-Sedgwick County Metropolitan Area Planning Department. 1977 and 1979.

In 1976, the U.S. Congress initiated a Bikeway Demonstration Program, which authorized federal grants for bikeway construction. The City of Wichita applied for and received a grant under this program to embark on a Central Business District (CBD) Bikeway Project. As a part of this project, a survey was conducted before (1977) and after (1979) the construction of the CBD Bikeway. The results indicated that there was an increase in bicycle ridership and that part of the increase was probably attributable to the new bikeway.

Guide to Bikeway Development. Wichita-Sedgwick County Metropolitan Area Planning Department, 1980.

The most comprehensive planning effort to date specifically concerned with bicycling was the Guide to Bikeway Development prepared by the Planning Department in 1980. Its primary purpose was to present a guide to development of a bicycle program for the Wichita Metropolitan Area and to foster interest and commitment toward the provision of future bicycling facilities and programs. The Guide examined the existing situation regarding bikeway facilities and programs, made general planning recommendations for the implementation of bikeway facilities and programs, presented potential bikeway locations and discussed funding and implementation.

In addition to these bicycle planning documents, other efforts have been put forth by the City of Wichita to enhance bicycling. These include bicycle safety education programs for children provided through the Police-School Liaison Program since 1978, the publishing and distribution of bicycle maps since the 1970's, and the formation of a Bicycle Committee which was in effect from 1975 through 1987. Such efforts over the years have contributed to the enjoyment and safety of bicycling in Wichita.



Boneshaker. circa 1860's

III. REGULATIONS

Bicycling is a form of transportation, and as such it is regulated by both state and local laws. These laws are generally intended to provide for the safe operation of bicycles as they mix with motor vehicles, pedestrians and other bicyclists. It is important that these laws be understood by all those involved in bicycling. A summary of the laws pertaining to bicycling in the State of Kansas and the City of Wichita is provided below.

Kansas Statutes

In the state of Kansas, bicyclists have basically the same rights and duties as other drivers of vehicles on the roads, except as otherwise provided in the statutes. [KSA 8-1587] The laws which pertain specifically to the operation of bicycles are summarized below. Failure to obey these laws is considered a traffic infraction.

Bicycle Defined. A bicycle is defined as "every device propelled by human power upon which any person may ride, having two (2) **tandem** wheels, either of which is **more than fourteen (14)** inches in diameter." [KSA 8-1405].

Traffic Laws. Traffic laws apply to all persons riding bicycles on the roadway or exclusive bicycle paths. [KSA 8-1586c].

Riding to the Right. Bicyclists must ride as near to the right side of the road as practical and exercise care when passing. [KSA 8-1590a]

Riding Two Abreast. Bicyclists shall not ride **more** than two abreast except on exclusive bicycle paths or lanes. [KSA 8-1590b].

Bicycle Paths. Wherever a usable bicycle path is provided next to a roadway, bicycle riders shall use the path and not the roadway. [KSA 8-1590c].

Carrying Passengers. No bicycle shall be used to carry more persons at one time than the number for which it is designed or equipped. [KSA 8-1588b].

Carrying Packages. No persons operating a bicycle shall carry any **articles** that prevents the driver from keeping at least one hand on the handlebars. [KSA 8-1591].

Clinging to Vehicles. Bicyclists shall not cling to moving vehicles. [KSA 8-1589].

Equipment. Every bicycle when used at night must be equipped with a lamp on the front that emits a white light visible from at least 500 feet to the front and with a red reflector on the rear of the approved type and be equipped with good brakes. All bicycle pedals sold must be equipped with a reflector of an approved type. [KSA 8-1592]. In addition, bicyclists must not ride on anything other than a permanent and regular seat which is attached to the bicycle. [KSA 8-1588a].

Registration. The State Statutes give local authorities the power to **regulate** the operation of bicycles and require registration and inspection, including the requirement of a registration fee. [KSA 8-2002].

Wichita Bicycle Ordinance

Key elements of Wichita's Bicycle Ordinance (**11.48.010**) are summarized below. The regulations apply whenever a bicycle is operated on any sidewalk, street, highway, bike path, public park, playground or other property owned or under the jurisdiction of the City or its agencies.

Bicycle Defined. A bicycle is defined as "every vehicle propelled by human power upon which any person may ride having two or more wheels, any of which is more than twenty inches in diameter."

License Required. Before operating a bicycle on the sidewalks, streets, parks, bike paths or highways of the City, a **53.00** license **must** be obtained and placed on the vertical tube of the bicycle. (No fee is charged to those who are physically incapacitated and whose only means of transportation is a specially constructed bicycle.) Licenses expire when ownership of the bicycle is transferred to someone outside the immediate family.

Equipment. Requirements are identical to that of the State. (See previous description.)

Traffic Laws. Bicyclists must obey all traffic ordinances and speed limits.

Riding to the Right. Bicycles must ride within five feet of the right-hand edge of the street, except under the following conditions:

- (1) When persons **14** years of age and older are riding two abreast, then they must ride as close to the right edge as possible.
- (2) When passing a vehicle.
- (3) When making a left turn.
- (4) When necessary to avoid unsafe conditions.
- (5) When on a one-way street, a bicyclist may ride within five feet of the left-hand curb.

Riding Two Abreast. Bicyclists shall not ride more than two abreast except on exclusive bicycle paths or lanes. Persons riding two abreast must not impede the normal movement of traffic and, on a laned roadway, **must** ride within a single lane.

Left-Turns. Left-turns may be made from either the left or right-hand lane in accordance with stated procedure.

Signals. Appropriate signals must be given when intending to turn left or right, stop or slow down.

Carrying Passengers. No more than one person may ride on a single-seated bicycle. **Children** under 5 years old may ride in a bicycle seat attached to the rear. Infants may ride in a backpack or a sling of an authorized adult.

Hitching to Vehicles. Bicyclists **may** not attached themselves to **moving** vehicles.

Bicycles on Sidewalks. Bicyclists on sidewalks or crosswalks **must** yield to pedestrians and give an audible signal before passing a **pedestrian**. Bicycles may not be **ridden** on sidewalks in the central business district except in designated areas.

Parking Bicycles. Bicycles may not be parked in any public place that is within one **city block** of a bicycle rack or designated parking area or that blocks travel or **presents** a traffic hazard.

Impounding. A bicycle may be impounded by the Police Department if it is not properly licensed or if the bicycle is not in a safe mechanical condition.

Penalties. The penalties for violating the City Bicycle Ordinance are as follows: a fine of up to **\$100** for the first conviction, a fine of up to **\$200** for the second conviction within a year, and a fine of up to **\$500** for the third or subsequent conviction within one year after the first conviction. According to Municipal Court, the current fine for bicycle violations is **\$15.00**.

Discussion

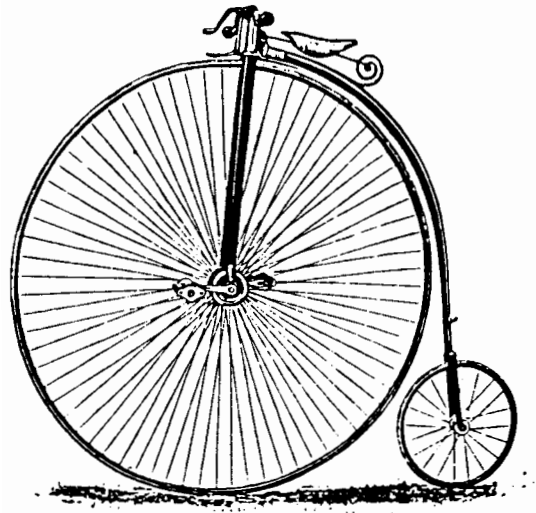
In general, the bicycle regulations in Wichita and Kansas appear to be adequate. The City Ordinance may be unnecessarily detailed and somewhat **complex** in a few areas (i.e., riding two-abreast, riding within five feet of the right with five exceptions, and procedures for making left turns). Nevertheless, the ordinance is generally consistent with the state statutes and there appear to be no **major** flaws in either the ordinance or the statutes that need immediate attention. There are, however, two areas that could be opened for further discussion. These are as follows:

- Bicycle Parking. The ordinance currently prohibits bicycles **from** being parked in a public place if there is a bicycle rack within one city block. One block is quite a distance for a bike rider to park his or her bike. One advantage of the bicycle is that it can be ridden right to the front door. Bicyclists usually want to leave their bicycles where they are safe and visible. In addition, the whereabouts of bicycle racks and designated areas are not generally well known. Therefore, the one-block rule may be too restrictive and unnecessary. If needed at all, the regulation **might** be changed from one-block to within viewing distance.
- Bicycles on Freeways. The existing regulations do not place any restrictions on bicycle riding on high-speed roadways. Bicycle riding is prohibited on all interstate highways, but not on other high-speed roadways. Because of the obvious conflict between bicycles and high-speed traffic, consideration should

be given to prohibiting all bicycle riding on urban freeways and expressways (i.e., Kellogg and the proposed Northeast Expressway).

Recommendation

- Wichita's bicycle ordinance should be regularly reviewed (i.e., every five years) and updated as necessary.



Ordinary. circa 1870's

IV. REGISTRATION

Registration of bicycles, which is required under the City Ordinance, serves several important functions: (1) it aids in the recovery of stolen bicycles, (2) it helps to identify bicycle riders in case of accidents. (3) it generates a small amount of revenue, and (4) it encourages bicycles to be maintained in a safe, mechanical condition.

The City (via administration by the City Treasurer's Office) requires all retail outlets of new and used bicycles in Wichita to license bicycles that are sold. The licensed representative (i.e., the retail outlet) is required to inspect the bicycle for safe mechanical condition, affix the license to the bicycle, complete a registration form and submit the necessary information to the Treasurer's Office. The license number, owner's name, address, phone number, date of birth and social security number, bicycle description and frame number are then filed in the Police Department. The retail outlet is paid \$1.50 per license for this service (one-half of the \$3.00 fee). The remaining \$1.50 goes into the City's general fund.

A license is required on all bicycles operated on sidewalks, streets, parks or bike paths within Wichita. The license remains valid until ownership of the bicycle is transferred outside the immediate family.

The number of bicycle registrations has been declining in Wichita, as indicated by the statistics shown below.

Year	<u>Number of Bicycle Registrations Sold</u>	<u>Percent Decline From Previous Year</u>
1982	10,360	—
1983	9,605	7%
1984	9,517	9%
1985	8,320	13%
1986	8,014	4%
1987	6,467	<u>19%</u>

Average Annual Decline: 9%

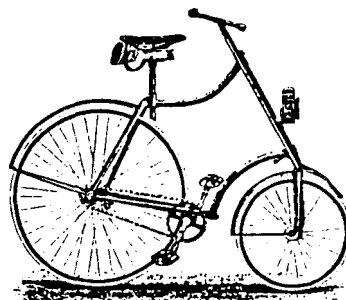
The decline could indicate that (1) fewer bicycles are being sold each year, (2) bicycles are being sold without proper registration, (3) most bicycles in use now are already licensed and only the new ones are left for licensing, (4) enforcement by police officers and oversight by the Treasurer's Office has gradually declined, or (5) any combination thereof.

The City of Wichita used to require annual registrations (until 1977). However, this requirement was not well enforced: therefore, the majority of bicyclists ignored the required annual registration. Obviously, if well enforced, more current information could be filed for accident identification and recovery of stolen bicycles, and more revenue could be generated. However, annual registration would also be more costly to administer, (primarily

for the Treasurer's Office) and **much** more time-consuming for **the** Police Department who **must** log and file all of the registration information as well as write out tickets for violations. Greater publicity would be required, too, in order to **remind** the public of the annual registration. In short, annual registration would be good if the City wanted to commit the time, money and resources necessary to make the program work.

Recommendations

- Continue with the one-time registration system.
- Increase enforcement of the one-time registration **system** by:
 - (a) Having police officers make regular "courtesy calls" at least once a year to all bicycle retailers (currently 41) to make sure they are properly registering bicycles that they sell:
 - (b) Having the Treasurer's Office mail out letters to all bicycle retailers at least once a year (perhaps in the spring) reminding them of **their** obligation to register all bicycles that they sell:
 - (c) Encouraging officers to mail out "notices of violation" to **parents** of children who are riding bicycles without proper registration (for further detail, see Enforcement section): and
 - (d) Encouraging officers to give out tickets to adult bicyclists without proper registration.
- Continue sharing the registration **fee** with the bicycle retailers to encourage their cooperation and to partly cover their costs.
- Earmark the City's portion of the registration fee for implementation of the proposed "child/parent mail-out notice of bicycle violation" program and the remainder to bicycle safety and education.
- Establish a Bicycle Board (appointed by the City Council) to oversee the spending of the bicycle registration fund and to provide direction on other bicycle program expenditures.
- Consider increasing the registration fee for the purpose of generating more **income** but not making it so high as to discourage registration. The registration fee was last increased in 1977 when it went from a **\$1.00** annual fee to a **\$3.00** one-time fee. An increase to **\$4.00** or **\$5.00** for a one-time registration fee might be acceptable if at least half of the fee was dedicated to bicycling.
- Distribute bicycle literature at the time of registration. Of special importance would be a **summary** of the City and State bicycle laws.



Humber Safety, circa 1880's

V. ENFORCEMENT

Enforcement of the Wichita Bicycle Ordinance is a function of the **Police** Department. According to the Police Department, however, few violators are ever cited. Reasons given include: (1) the often minor nature of the offense, (2) the shortage of personnel available to deal with the problem, (3) the perceived attitude of the public that police officers surely have **more** important things to do than pick on bicyclists and especially children, and (4) police citations cannot be issued to children under **14** years of age.

The question is, then, is greater enforcement desired? In theory, the advantages of a more vigorous enforcement **program** would be the following: (1) a reduction in bicycle accidents that are due to failing to observe the rules of the road (i.e., riding on the wrong side, **improper** night time equipment, etc.), and (2) an increase in bicycle registrations which would result in more revenue, better accident identification, and easier recovery of stolen bicycles. And of course, this would also mean that the Police Department would have to either devote additional time and **money** to bicycle enforcement or place a higher priority on bicycle enforcement in lieu of **some** other type of problem.

Obviously, there are hundreds of laws on the books and not all of **them** can be vigorously enforced. However, all of them should be taken seriously and citations should be cited whenever appropriate. This should apply to bicycle laws as well.

Some of the problems expressed with bicycle enforcement could perhaps be alleviated if some **non-traditional** approaches could be taken. For example, in **some circumstances**, it **might** be possible to take the "criminal" **element** out of enforcement by having the officers issue non-penalizing "notice of improper bicycle operation." Many **people** are unaware of the bicycle laws and this could be a way of educating **them**. In addition, children who cannot be issued citations could be given this type of notice. The Police Department has begun looking into the possibility of mailing notices to the parents **when** their children violate the bicycle laws. This would be even **more** effective. Another approach **might** be to issue verbal warnings or "defect tickets" instead of citations, especially regarding registration or equipment. Police officers might be **more** willing to stop children and adult violators of "minor" bicycle laws if such options were available to **them**.

According to the Police Department, bicycle enforcement has been de-emphasized over the years, but that they are now starting to re-emphasize it. A recently **approved** three-year traffic grant from the State (effective October 1, 1988) should help this effort.

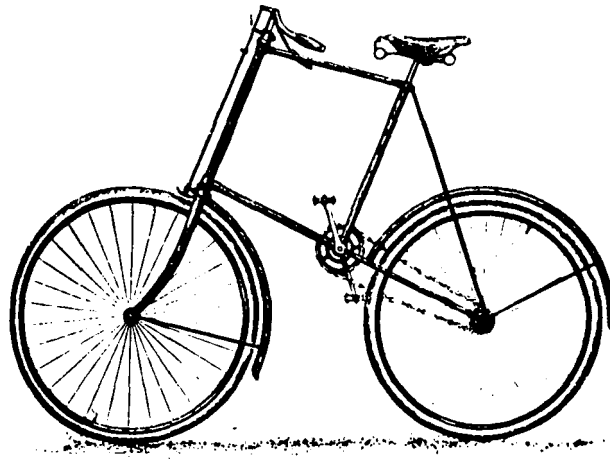
Recommendations

- Primarily for the safety of all bicyclists in Wichita, City police officers should be encouraged to issue bicycle citations as appropriate.

Since police citations cannot be issued to children under **14** years of age, the Police Department should be strongly encouraged to implement a special children's bicycle enforcement **program** in which all violators under the age of **14** have special notices mailed to their parents informing them of the viola-

tion and when and where it occurred. Such a program would (1) encourage police officers to stop children who are violating the law, (2) educate both the children and their parents on bicycle laws, and (3) demonstrate the seriousness of violating the law.

- Additional consideration should be given to the possibility of issuing verbal "warnings" or "defect tickets" for some bicycle violations, such as those regarding equipment or registration.



Giraffe. circa 1880's

VI. BICYCLE ACCIDENTS AND SAFETY

Bicycle Accidents

Accidents are naturally of concern to bicyclists. Whenever bicycles and motor vehicles mix, there is always the potential for serious problems. Now, with the ever-increasing interest and participation in bicycling, this potential for conflict **becomes** even greater.

On a local level, bicycle accidents (those involving **motor** vehicles) have increased over the past three years, going from **70** accidents in **1985** to **88** in **1986** to **93** in **1987**. As indicated in the table below, the largest number of bicycle accidents occur during the six month period from April through September, when it can be assumed that the largest number of bicyclists are out riding. This would be the obvious time to increase enforcement and education for peak effectiveness.

Number of Bicycle/Motor Vehicle Accidents
in Wichita, Kansas By Month, 1985-87

	<u>1985</u>	<u>1986</u>	<u>1987</u>
January	1	1	4
February	0	4	2
March	1	6	3
April	13	14	7
May	8	9	9
June	10	16	16
July	13	13	10
August	14	10	16
September	7	5	15
October	1	6	7
November	2	3	1
December	<u>0</u>	<u>1</u>	<u>3</u>
TOTAL	70	88	93

Source: Wichita Police Department

On a national level, the number of deaths resulting from bicycle-motor vehicle accidents has remained relatively unchanged since **1975**. The most dramatic change, however, has occurred in the percent of deaths by age. Since **1960**, the proportion of deaths occurring to young adults (age **15-24**) and adults (**25 & over**) has steadily increased while the percent of deaths by children has decreased. In **1960**, **78%** of the deaths occurred to children, with only 9% occurring to young adults and **13%** to adults. By **1986**, only **32%** of the deaths occurred to children, with **33%** occurring to young adults and 35% to adults. This is a good indication of the growing adult participation in bicycling.

Bicycle Deaths by Age

Year	<u>Deaths</u>	Death <u>Rate*</u>	Percent of Deaths by Age		
			<u>0-14</u>	<u>15-24</u>	<u>25 & Over</u>
1960	460	1.63	7870	9%	13%
1965	680	1.75	64%	18%	1870
1970	780	1.38	6670	15%	19%
1975	1,000	1.05	49%	2870	23%
1980	1,200	1.20	35%	36%	29%
1985	1,100	1.02	34%	30%	36%
1986	1,200	1.08	32%	33%	35%

*Deaths per 100,000 bicycles in use.

Source: Accident Facts, National Safety Council. 1987.

Recommendations to Improve Safety

Facilities

- **Improve**, expand and add exclusive bicycle facilities.
- Incorporate improved roadway design for adult commuter bicyclists (i.e., wide curb lanes, wider bridges, **smooth** pavement surfaces, etc.).

Education

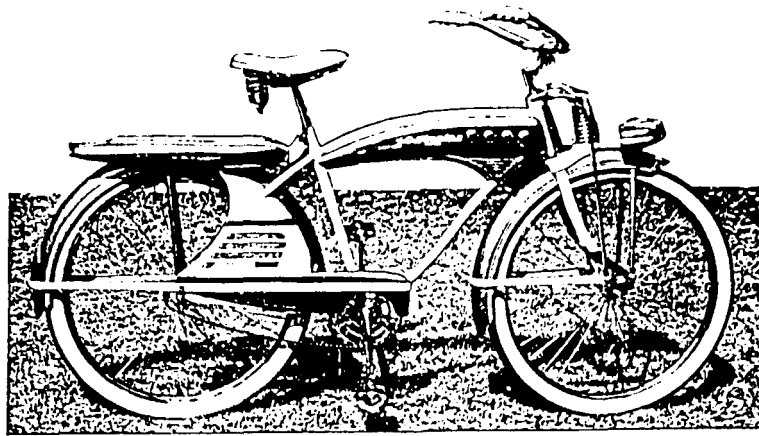
- Provide safety education literature (including the City Bicycle Ordinance) to **all** bicycle registrants.
- Support the bicycle education program provided through the **Police-School Liaison Program**.
- Teach children to always stop before leaving the driveway and entering the street. (Common cause of accidents.)
- Encourage children not to ride on busy streets, on high-speed streets or at night. **Emphasize** this in any literature distributed to parents.

Enforcement

- Encourage greater enforcement of the bicycle ordinance for both children and adults.
- Encourage the State to revise the State Vehicle Code so that all motor vehicles would be required to have their lights on at and between sunset and sunrise rather than 30 **minutes** after sunset and **30** minutes before sunrise.

Equipment

- Encourage the use of bicycle safety flags for children to increase their visibility to motorists. The safety flag consists of a bright red flag attached to a long thin flexible pole (about 5 feet) that is mounted on the rear of a bicycle. The flag can be easily seen by motorists to alert them of the presence of a bicyclist. This can be critically important when a child rushes out of a driveway without stopping or looking. These flags could be given away at registration or through the Police-School Liaison Program.
- Encourage more frequent use of better bike lights at night (for both children and adults).



J. C. Higgins, circa 1953

VII. EDUCATION

Police - School Liaison Program

In Wichita, bicycle safety education is offered through the Police-School Liaison Program. The liaison program, which is a cooperative effort between the Police Department and the Wichita Public School System (since 1978) offers a variety of program topics (including bicycle safety, pedestrian safety, vandalism, drugs, etc.) for children in kindergarten through twelfth grade. Presentations on these topics are available at the request of the individual teachers, who are made aware of the programs through the school system. (This also includes private and parochial schools within the City of Wichita.)

The bicycle safety presentation is offered to children in kindergarten through sixth grade. The presentation consists of three sessions: an orientation session directed by the teacher, a session presented by the liaison officer, and a follow-up session by the teacher. The teacher is provided with instruction material from the officer. The primary objectives of the course are for students to know the bicycle safety rules, demonstrate the basic hand signals, recognize traffic signals and recognize the importance of proper bicycle maintenance.

During the 1987-88 school year, the four Wichita Police Liaison Officers made bicycle presentations to 114 classes, or 3,078 students. This would amount to roughly 13% of the estimated 24,000 Wichita students in kindergarten through sixth grade. Most of the bicycle safety presentations are made in the springtime, when bicycle interest and use are relatively keen. The bicycle program is currently being enhanced through a three-year traffic grant from the State (effective October 1, 1988).

This fall, the Sedgwick County Sheriff's Department is beginning a similar type of program in which bicycle safety will be taught to students in the outlying school districts.

Bicycle Skills and Safety Clinic

Each summer, the Wichita Police-School Liaison Program sponsors a free Bicycle Skills and Safety Clinic for 6-11 year olds. The Clinic includes classroom instruction, films and practice on the bicycle skills course in Linwood Park. Participants may attend the clinic on any day designated for their age group.

During the summer of 1987, approximately 400 students participated in the clinic. About 100 students had to be turned away because the classes had filled up. This year the clinic was expanded from four to six weeks, allowing as many as 700 students to attend.

In May of each year, the **Police Liaison** Officers send out notices of the bicycle clinic to the principals of the Wichita schools, along with student registration forms. Nearly **24,000** forms were distributed this year. Generally, no other form of advertising is used. This year, a short article about the clinic was placed in the City employees' newsletter. General information about the bicycle skills and safety course is also provided in the Wichita Bicycle Map.

The Bicycle Skills Course at **Linwood** Park, where the bicycle safety clinic is held, was built in **1981** by the City of Wichita (through the coordination of the Bicycle Committee) with a grant from the Federal Highway Administration (**\$15,000** federal; **\$5,250** local). The course consists of an asphalt surface with painted lines to follow, traffic signs, various obstacles to overcome and instructional signs. The course is surrounded by a chain link fence and has bleachers and lighting.

The course is currently in need of repair and maintenance. The asphalt is buckling in critical areas, the painted lines and some of the signs have faded, and in general, needs some help. In the past, the Wichita Bicycle Committee made periodic improvements to the course (with funds supplied through bicycle registrations). Now that the Bicycle Committee is no longer in existence, it is unclear as to who is responsible for maintaining the course.

Wichita Bicycle Maps

For many years, a Wichita Bicycle Map had been produced and updated regularly by the Wichita Bicycle Committee. The current map, which was printed in **1986**, contains a map of the City with all of the bike paths and routes highlighted. It also contains on the reverse side a wealth of information on bicycle safety, bicycle maintenance, key elements of the bicycle ordinance, a list of bicycle repair shops, points of interest, paved roads in the County and downtown locations having bicycle routes. These maps, which are **made** available to the general public at no charge, are distributed to local bicycle shops, the Police Department, the Chamber of Commerce and other groups and individuals upon request. As of May **1988**, the City Treasurer's Office had a supply of about **7,500** maps. If these are distributed at the same rate as in the past, the supply should last through the spring of **1989**. (The **1986** printing cost was **39** cents each for **22,000** maps).

Bicycle Literature and Supplies

A variety of educational materials are available for bicycle education. The Wichita **Police-School Liaison** Program produces a booklet called "Cycle Safely" that is used during bicycle safety presentations and the bicycle skills clinic. Various other pamphlets and supplies are used whenever they are donated to the Police Department or funding is made available for printing or purchasing.

The Sedgwick County Sheriff's Department obtains some of its bicycle literature free of charge from insurance companies and the Kansas Department of Transportation (Safety Department). They also order literature from various publishing companies for use in the bicycle education program.

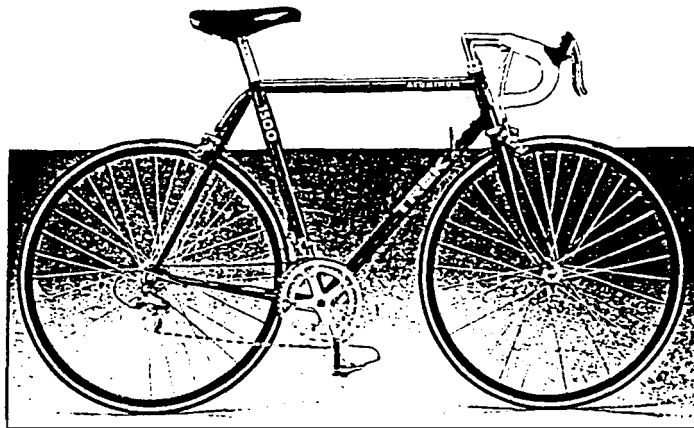
Driver Education

In Wichita's driver education classes, bicycle safety is included as a part of their general emphasis on giving pedestrians and bicyclists the right-of-way. The driving simulator is used to give the students practice in looking out for and responding to bicycles, motorcycles, children and various obstacles.

Recommendations

- Provide bicycle safety education material at the time of bicycle registration (include the bicycle map and a summary of the City Bicycle Ordinance).
- Provide parental guidance on bicycle safety education by distributing literature to parents at the time of enrollment—preferably at the level of kindergarten or first grade. The information could include:
 - common types of accidents
 - preventive steps to take
 - importance of proper bicycle fit
 - importance of bicycle maintenance
 - recommended age for bicycle riding
 - importance of establishing family rules on where to ride, time of day, only with an adult, and so forth.
 - Wichita's Bicycle Ordinance
 - basic bicycle safety rules
 - awareness of the Summer Bicycle Clinic
 - a basic skills and knowledge test for parents to give their children before riding on the street.
- Support the Wichita Police-School Liaison's efforts in bicycle education by providing them with current, relevant teaching aids.
- Make the necessary repairs to the Bicycle Skills and Safety Course at Linwood Park and assign responsibility for continued maintenance of the course (i.e., Park Department).
- Improve and expand the Summer Bicycle Clinic as needed to meet the demand. This might include: (1) offering clinics at additional locations throughout the city, which would require a "mobile" skills course; and (2) developing a more challenging skills course for 4th-6th graders.
- Encourage coordination between the City and County bicycle education programs to enhance each others efforts.

- Encourage private **support from local bicycle clubs**, bicycle shops and civic organizations. Support activities could include bicycle rodeos (which are designed to develop, exhibit and evaluate bicycle driving skills), safety checks, or basic bicycle maintenance at special events such as the River Festival.
- Continue updating and distributing the Wichita Bicycle Maps if adequate funds are available. Consider charging a small fee (i.e., 50 cents) for the maps to help cover the costs.
- Encourage the Park Department and others to offer adult and teenage bicycle **courses/tours** which would not only provide fun and exercise but also instill safety skills and good riding techniques.
- Encourage the Wichita School System to make bicycle education a 'higher priority, perhaps by incorporating bicycle education in physical education classes or by expanding the efforts of the Police-School Liaison Office.
- Encourage the Kansas Department of Motor Vehicles to give more attention to bicycle safety in the driver's manual, driver's license **examinations and/or** driver's education classes.



10-Speed. *circa 1970's*

VIII. ENCOURAGEMENT

In order for any bicycle program or plan to be successful, local government, private businesses and citizens **must** work together. Encouragement is an area in which both the public sector and private sector can contribute significantly to the quality of life in Wichita.

Local governments, such as the City of Wichita, can generally best encourage bicycling through the construction and maintenance of good bicycle facilities as well as the provision of adequate safety education programs. The marketing and promotion of bicycle sales and use of bicycles can generally best be accomplished by the private sector, but obviously, good cooperation from local government is essential.

Currently in existence are a **number** of activities, facilities and organizations that play a role in encouraging bicycling in Wichita. Examples of these are listed below:

Activities/Programs

- **River** Festival Bicycle Races
- Bike-A-Thon (Diabetes)
- MS Fall Tour
- Optimist Club Bicycle Rodeo
- Police-School Liaison **Program**

Facilities/Aids

- Bicycle Skills Course in Linwood Park
- Bicycle Motocross (**BMX**) Course at Emery Park
- Bicycle Paths and Routes
- Wichita Bicycle Map

Organizations/Boosters

- Oz Bicycle Club
- Local Bicycle Shops

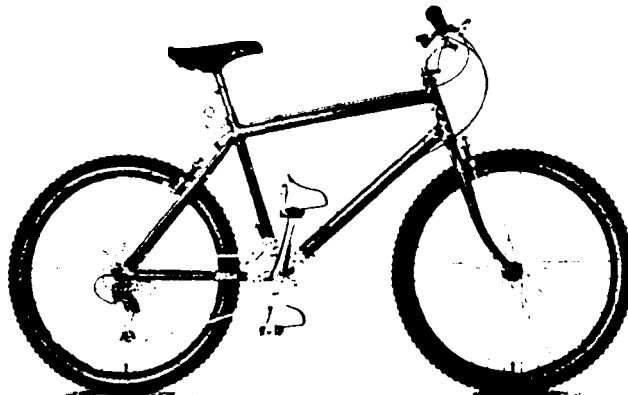
These are all positive steps in bicycle encouragement, but more can be done. **Some** ideas for increased enhancement of bicycling in Wichita are listed in the **recommendations** that follow.

Recommendations

- Within the City structure, perhaps the Park Department, a bicycle coordinator should be designated to work with the **community** in encouraging bicycling.

The City should cooperate with **the** private sector in sponsoring various **bicycle** events, such as road races, tours, rodeos and festivals. These could become major annual events, such as the Wichita River run, and provide a yearly focus on bicycling.

- The **Oz** Bicycle Club should be encouraged to take an even more active role in bicycle encouragement within the community; **i.e.**, set up a volunteer speaker's bureau, organize regular **radio/TV/newspaper** interviews on bicycling, designate a bicycle spokesperson or board, sponsor bicycle races and tours, keep the Police Department and Sheriff's Office aware of updated bicycle information and training material, work with bicycle shops to put on new equipment and clothing shows; work with local employers to provide bicycle parking, and in general, serve as a **promoter** of bicycling.
- The City should maintain and expand its current bikeway system to encourage safe and pleasant bicycling throughout the **community**.
- The City should provide adequate bicycle parking at all public facilities and encourage the private sector to provide bicycle parking at local businesses.
- Whenever feasible and appropriate, the City should incorporate bicycling design improvements during the construction or reconstruction of roads and bridges (**i.e.**, wider curb lanes, paved shoulders, wide sidewalks, **etc.**).
- The City should continue publishing and distributing the Wichita Bicycle Map **and/or** other appropriate bicycle literature.
- The Park Department should consider offering bicycle **classes/tours** for both adults and children (through their **community** recreational program), which would not only provide fun and exercise but also instill safety skills and good riding techniques.
- The City and the schools should provide the necessary support and cooperation for bicycle education (**i.e.**, Police-School Liaison Program).



Mountain Trail Bike, circa 1980's

IX. ENGINEERING

This section includes an overview of the **existing** bicycle **system** in Wichita, an in-depth analysis and evaluation of the condition of **the** bicycle paths, proposals for path extensions and new bikeway development, and recommendations for street improvements which would help the bicycle commuter. Considerable assistance on this section was provided by the Engineering Division of the Wichita Department of Public Works.

Existing Facilities

Bicycle Paths

The people of Wichita currently enjoy fifteen miles of exclusive bicycle paths (**i.e.**, those that are completely separated from vehicular traffic). These include the Arkansas **River** Path, the Canal Hike and Bike Trails and the Downtown Bikeway. These bikeways are briefly described below.

The Arkansas River Path is the longest and most popular bicycle path in Wichita, extending approximately nine miles along the banks of the Big Arkansas River from 21st Street North to Galena Street on the south (**near MacArthur**). Development of **the** River Path began in the early 1970's in conjunction with the City's riverbank **beautification** efforts. The first section built was between Douglas and Lewis Street. The path has been gradually extended since then, with the last extensions occurring in the early 1980's.

The Canal Hike and Bike Trails were built in 1979 as a part of the interstate construction project. This four-mile trail runs underneath and alongside the I-135 Canal Route, starting at 17th Street North and ending at **Stafford** Street (just north of Pawnee).

The Downtown Bikeway was built in 1978 to serve as a demonstration **commuter** bikeway. This two-mile bikeway goes into the heart of the central business district, connecting with the River Path at Seneca, First Street and Maple. A **combination** of exclusive paths and shared sidewalks is used.

Path Evaluation

It was decided that before any new bikeway proposals were considered, that a complete inventory of the existing **system** should be done. In this way, **information on** bikeway conditions could be collected and evaluated to **determine** needed repairs and potential expansions.

Inventory Procedure

In order to accurately assess the condition of the existing bikeway facilities, each facility was physically inspected, either on a bicycle, by car or both. These inspections were performed primarily by the traffic engineering staff with assistance from planning, park department, and a volunteer from the Bicycle Task Force. Evaluation forms were provided so that consistent and reasonable conclusions about existing conditions could be reached. The evaluation concentrated on the physical aspect of the paths, such as pavement condition, **sight** or path obstructions, and informational or directional signing. During the inventory procedure for the paths, additional comments concerning any perceived shortcomings, problems not specifically listed, and suggested improvements were noted.

Analysis/Evaluation

In consideration of the fact that portions of the Wichita bicycle paths are well in excess of ten years old and that the path surfaces have been neglected for many years, the evaluation revealed that they are in better condition than **might** have otherwise been expected. Nevertheless, years of neglect have taken their toll and the entire system is now in need of repairs, upgrading, and overall maintenance in order to bring the system up to acceptable standards.

Recommended Improvements

Listed below (and shown on Map 2) are recommended **improvements** to the existing bicycle **system** in order of suggested priority. The objective of the proposed **improvements** is to bring the bike path system up to acceptable levels of safety and comfort, and not achieve a "**smooth** as glass" finish. Cost estimates are also **provided**.¹

1. Clean all path surfaces and trim the height and sight obstructing plants and trees. Sand and dirt accumulation along the paths is both irritating and **dangerous**. Sand and soil thrown by the bicycle tires spatters the cyclists clothes and equipment and tends to aggravate the cyclist and make other problems along the path seem worse. Cleaning the pathways will make riding more relaxing and decrease the irritation caused by **minor** bumps and cracks along the paths. This cleaning could be accomplished along the entire length of the pathway system by a Park Board maintenance crew of two in about a week. This would cost approximately \$1,250.

This is one of the most cost effective measures that can be taken and should be done immediately. Once the major overhaul has been done, **the** paths should be cleaned on a regular basis (at least once a year).

¹ Cost estimates were provided by Engineering staff using **material** and labor costs obtained from the Engineering Division of the Wichita Department of Public Works. Improvement costs include a 10% contingency cost to account for fluctuations in material costs or unanticipated repair difficulties. Prior to any actual repair or construction, an in-depth engineering study would be required.

2. The Seneca to Kellogg portion of the Arkansas River Path should be upgraded. This section of the River Path is the worst overall section on the pathway system. Improvements include pothole patching,, crack sealing, asphalt overlay, complete removal and replacement of sections of the path. signing and upgrading rest areas. The cost of improving this section of the River Path is estimated at \$11,650.
3. The Canal Path from Douglas to 17th Street North should be upgraded. It is not in bad condition as far as the path surface is concerned: however. all street intersections in this section are at-grade and many do not have pedestrian crossings or warning signs. Upgrading of this section is a safety priority. The cost of path upgrading and signing is estimated at \$1,680.
4. Improve the Kellogg to Harry Street section of the Arkansas River Path. This section is in relatively poor condition. with problems similar to those in the Seneca to Kellogg section. Upgrading costs for this section (including signs and bench replacements¹ are projected to be \$13,230.
5. Upgrade the Arkansas River Path from 21st Street through Sim Park. This section contains very severe damage under the 21st Street Bridge. The rest of this section is in relatively good condition. Improvements to this section include crack sealing. pothole patching. complete removal and replacement of some sections of the path. signing and barrier repairs. The cost is estimated at \$10,160.
6. Repair the Canal Path from Douglas Street to the south entrance at Stafford Street (near Pawnee). This section is generally in good condition except for the section through South Linwood Park. Improvements needed included crack sealing. pothole patching. signing. and safety improvements (i.e., striping or redesigning hazardous sections). Cost of the improvements is estimated at \$13,000.
7. Improvements should be made to the Harry to Galena Street section of the Arkansas River Path. This section is in relatively good condition except for minor shoulder problems under the John Mack Bridge and extensive but non-hazardous longitudinal cracking south of Santa Fe Street. Anticipated improvement costs (including signing and barrier repair) are \$11,600.
8. The CBD Bikeway from the Seneca Street Bridge to Wichita needs to be improved. Repairs consist of crack sealing. pothole patching. removal and replacement of sections of the path. and signing. Costs are estimated at \$1,600.
9. The Bicycle Skills and Safety Course at Linwood Park should be repaired. The surface is beginning to crack and deteriorate. and the painted markings are beginning to fade. There is sand scattered about the course. making some of the maneuvers difficult or hazardous. The course should be cleaned. the cracks cleaned and sealed, the course markings repainted and damaged signs replaced. Estimated cost is \$1,000.

The total cost of making all the above improvements is estimated at \$65,170. The largest portion of this cost would go for needed improvements to the River Trail. estimated at \$46,540. The remaining costs would go for making needed improvements to the Canal

Route (estimated at \$14,680) and the Downtown Bikeway (estimated at **\$1,600**), general cleaning of all the paths (estimated at \$1,250), and for repair of the Bicycle Skills and Safety Course (\$1,000).² These costs are shown in the following table:

<u>Bikeway Repair Costs</u>	
River Trail	\$46,640
Canal Route	14,680
CBD Bikeway	1,600
General Cleaning	1,250
Safety Skills Course	<u>1,000</u>
Total	\$65,170

In addition to making the repairs listed above, the following recommendation is made to further enhance and improve the existing trails:

- The River Trail and the Canal Trail should be renamed to the "Arkansas River Bike Trail" and the "Chisholm Creek Bike Trail." Signs should be replaced as needed for identification purposes.

On-Street Bicycle Routes

In addition to the exclusive bicycle paths, the City of Wichita maintains a **system** of signed on-street bicycle routes, which was developed in the early 1970's. Instead of separating bicyclists from vehicular traffic, signs are used to alert motorists that they must share the roadway with bicyclists. The routes were originally designated on the basis of low traffic volume and neighborhood connections with parks, schools and other activity centers. Over 80 miles of primarily residential streets are currently designated and signed.

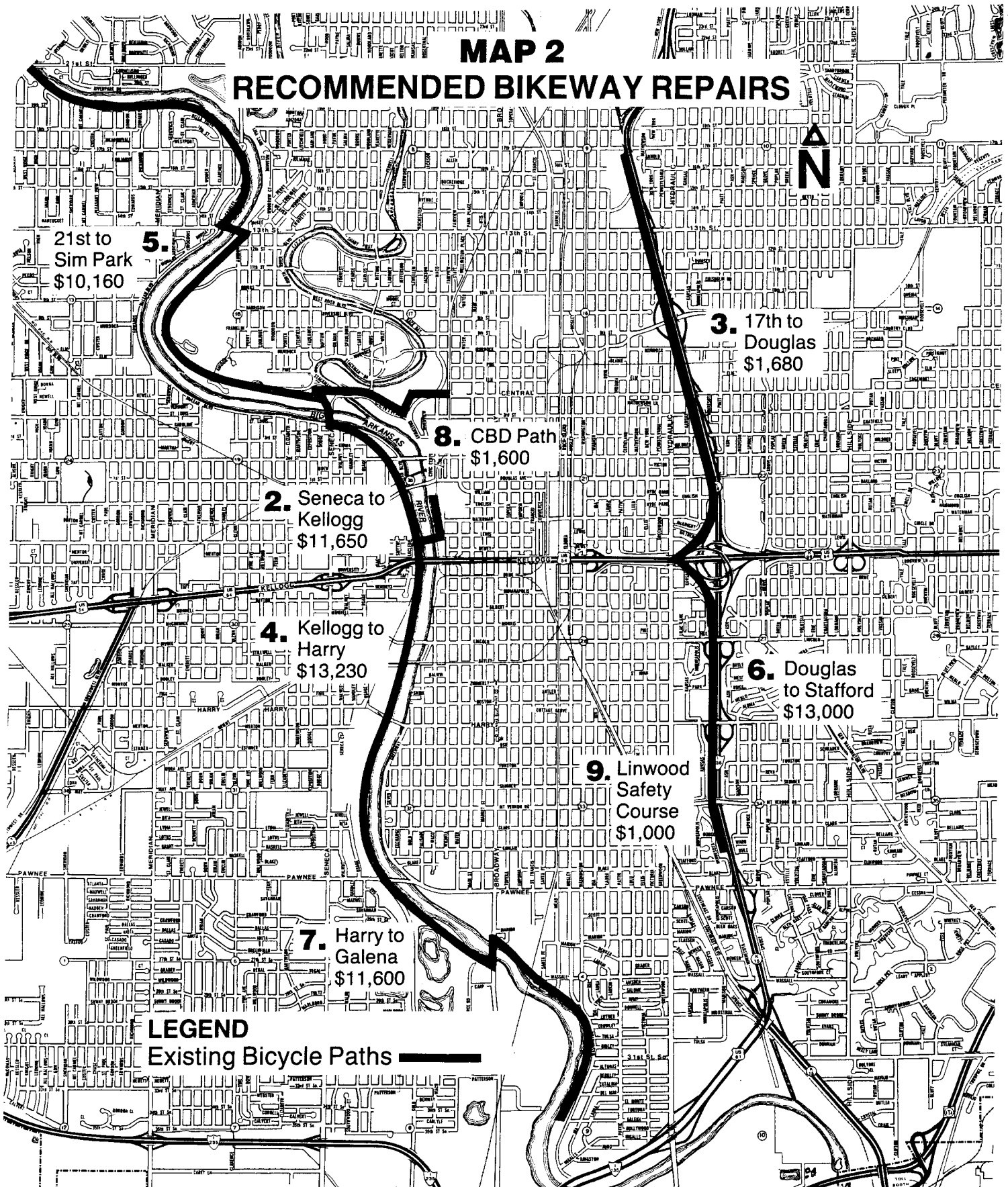
The on-street system serves as a low-cost means of encouraging and channelizing bicycle traffic. It does not, however, provide the safety of a separated bicycle facility. In addition, the routes are often circuitous in order to keep the bicycle traffic off higher volume roads. The result is often frustration for the utilitarian cyclist and boredom for the recreational rider.

Since its origination, the on-street **system** has received periodic evaluations and signs have been replaced from time to time. The most recent sign inventory, completed by volunteers in August 1988, revealed a total of 125 **missing** signs. Replacement costs are estimated at \$7,000. A complete evaluation and update of the system, however, has not been done for many years. It is recommended that before any large-scale effort is made to promote the use of this system (including reprinting of the Wichita Bicycle Maps and perhaps replacement of any signs), that the entire system be critically re-evaluated within the next two years to determine whether continuance and maintenance of this **system** is still desirable and if so what changes **and/or** improvements might be made.

² A complete in-depth analysis of the three bicycle paths along with detailed cost **estimates** is available from the Traffic Engineering Division of the Wichita Department of Public Works and the Metropolitan Area Planning Department.

MAP 2

RECOMMENDED BIKEWAY REPAIRS



1. Clean All Path Surfaces
\$1,250

New Bikeway Development

Bikeway Criteria

Before any potential new bikeways were proposed or studied, a list of criteria was first developed to serve as a general guide. The following eight criteria were established as the basis for selecting and studying new bikeway projects:

Cost • Obviously, cost is an important factor. The less expensive it is to construct, the more likely it is to be built.

Availability of Right-of-way • It is easier and cheaper to use public right-of-way than to acquire land from private owners. Effort should be made to concentrate on **locations** where right-of-way is available at minimal cost.

Geographic Distribution • Bikeways should be made available to as many residents as possible. Efforts should be made to provide facilities throughout the metropolitan area and make them as accessible as possible.

Opportunity • Many bikeway projects are a result of the right opportunity—an abandoned railroad, a new bridge or highway, road construction, major landscaping, etc. Building a bikeway at the right time and place can make it cheaper and more likely to happen.

Potential Use • One important factor should be whether or not people will use the path. Is the path interesting? Does it lead anywhere? Is it accessible to a **number** of residents?

Continuity of the System • Every effort should be made to utilize the existing system to provide for greater use and longer rides.

Recreation • The serious adult commuter cyclist usually wants to take the fastest, most direct route, which is generally the street system, not the bicycle system. The paths that are being proposed are directed at the recreational and novice cyclists who do not feel comfortable competing with cars and do not mind taking an indirect route or mingling with joggers, skaters, etc.

Safety • Traffic safety and personal safety are important to users of recreational bike paths. All bicycle paths should be designed and located so as to minimize traffic conflicts as well as any personal hazards.

It would be difficult at best to **meet** all of these criteria when proposing new bikeways. Obviously, there must be some trade-offs. For example, continuity of the **system** is desirable, but it is not always practical, cost effective or even possible. Likewise, geographic distribution is important so that all citizens can benefit, but other factors may override that one such as lack of opportunity or unavailable right-of-way. And cost is always a serious concern. History tells us that there is not an abundant supply of public funds available for bikeways. Therefore, some tough choices have to be **made** in recommending new bikeways. For purposes of this plan, every effort was made to be reasonable and realistic, while using the stated criteria as a guide.

Bikeway Proposals

Eight new bikeways have been identified for potential development. Two are located in the northeast and one each in the northwest, west, southwest, south, southeast, and north part of Wichita. In addition, six improvements to the existing River Trail are proposed.

The eight new bikeway proposals and the six proposed River Trail improvements are presented as follows, along with cost estimates and **maps**:³

1. Northeast Expressway - The first proposed bikeway is to build an exclusive bicycle path adjacent to the proposed **K-96/Northeast** Expressway. Total cost of this eight-mile project, from Hillside to Central, is estimated at \$604,000. (See Maps 3 and 4.)
2. 21st Street/Zoo Path - The second proposed bikeway would provide a connection from the northern section of the River Trail to the Zoo, the **Sedgwick** County Park and even beyond to as far as Lake Cheney. Improvements would include an exclusive bike path from the 21st Street Bridge to Maize Road (estimated at \$338,000), modifications to the Zoo Boulevard Bridge (which includes ramping the pedestrian stairways for bicycle use, estimated at **\$47,000**), and construction of a bicycle bridge over Slough Creek (estimated at \$30,000). The total cost for this 4.5 mile project, from 21st Street Bridge to Maize Road, is estimated at \$415,000. Existing and proposed paved shoulders from Maize Road to Lake Cheney would complete the link. (See Maps 3 and 5.)
3. Cessna Park - The third proposal is to provide a 1.5 mile scenic bike trail through Cessna Park that would wind south along the wooded creek to connect with Planeview Park. Estimated cost for this project is \$141,000. (See Maps 3 and 6.)
4. Floodway - The fourth proposal calls for building a bike trail along the west bank of the **Floodway** between 21st Street and K-42, connecting two proposed bikeways and the River Trail. The cost of this five-mile trail is estimated at \$384,000. There are legal issues surrounding this project that would have to be resolved concerning recreational use of the floodway. The right-of-way for the **Floodway** was condemned for flood control use only and to expand its use may require condemnation of the land for recreational purposes which might require additional public funds. (See Maps 3 and 5.)
5. Burlington-Northern Railroad - The Burlington-Northern Rail Line, between the Canal Route and the proposed Northeast Expressway, if ever abandoned, would provide an excellent **opportunity** for an **exclusive bicycle** path. A bike path in the seven-mile corridor would connect the existing Canal Path with the **proposed** NE Expressway Path and provide a nice link to Wichita State

³ Cost estimates were provided by the Planning Department and Engineering. The estimates generally assume a 10 foot wide path, a 10% contingency and no right-of-way costs. Prior to actual construction, an in-depth engineering study would be required.

University. The **cost of building** such a path is estimated at \$529,000. The cost could be higher, depending on the cost of removing the railroad ties and whether or not this would be done by the railroad or the City. (See Maps 3 and 4.)

6. Santa Fe Railway - The sixth proposal calls for an exclusive bike trail along K-42, extending six **miles** from the River Trail to Tyler Road. Construction of such a facility would necessitate abandonment of the Santa Fe Railroad. **The** Railroad has notified the Interstate Commerce Commission of its intent to apply for abandonment within the **next** three years for the section from **Clonmel** to the junction with Union Pacific Railroad. Total cost of this bike-way project is estimated at \$453,000 (not including any rail or tie removal). (See Maps 3 and 7.)
7. 13th Street Bridge - The existing River Trail could be **enhanced** and made considerably safer by improving the section at 13th Street. Bicyclists must now use the high, narrow sidewalks on the bridge and cross under the bridge on the west side. Unfortunately, most people choose to cross at the road on the east side for direct access to the bike rental shop and nearby convenience store, thereby creating a safety hazard on 13th Street. It is **recommended** that when the bridge is reconstructed, that wider, more accessible sidewalks be constructed and that a trail be added that goes under the bridge on the east side. (See Maps 3 and 8.)
8. Seneca Street Bridge - When the Seneca Street Bridge is reconstructed, **the** curve on the southwest side of the bridge should be widened for safer access to the bike ramp down to the river. **Also**, curb cuts at that spot and across **McLean** would improve access to and from the Trail as well as the bike rental shop on Seneca. (See Maps 3 and 8.)
9. Lewis Street Bridge - The connection **from** the River Trail to downtown at Lewis Street could be improved to provide better access to Century II, the Exhibition Hall, the **Library**, the **Omnisphere** and other downtown attractions. Recommended improvements include widening the curve at **the** northwest corner of the bridge and adding appropriate informational and directional signs. (See Maps 3 and 8.)
10. Watson Park - The entrance to Watson Park from the River Trail could be **improved** with appropriate signing, a short asphalt extension through the entrance gate and making sure the gate **remains** open during regular park hours. (See Maps 3 and 8.)
11. East Bank - As part of the downtown redevelopment efforts, a bike path could be built on the east side of the Arkansas River which would extend the existing east side bike path from Lewis Street to beyond Kellogg. An estimated cost for constructing a path from Lewis to Indianapolis would be \$28,000. (See Maps 3 and 8.)
12. South River Trail - The southern portion of the existing River Trail could be extended. The cost of building a two-mile trail from **Galena** Street to beyond Hydraulic is estimated at \$151,000. (See Maps 3 and 8.)

13. Southern Connection - A southern connection between the Arkansas River Trail and the Canal Route is a desirable long-range goal. Finding a suitable connection is complicated by the **existence** of a sewage treatment plant and the Canal itself. The cost of building a 3.3 mile path from the River to the Canal is estimated at \$247,000. (See Maps 3 and 8.)
14. Northern Connection - A northern connection between the Arkansas River and the Canal Route is also a desirable long-range goal. The industrial section between 17th Street and Broadway **poses some** complications. The cost of constructing a 6.4 mile path from 21st Street North along the **Floodway** to 37th Street North and down the Canal is estimated at \$481,000. (See Maps 3 and 8.)

In general, the bikeway proposals that have been made, meet or address the criteria that were set forth. Nearly all of the proposed bikeways are on public right-of-way, which addresses cost and opportunity as well. Opportunity and cost are further addressed with the proposed use of railroad right-of-way and planned road construction. Geographic distribution has been attempted with proposed trails in all four quadrants of the city, which also addresses potential use. Continuity of the **system** has been improved, although this is one area that falls short of total achievement because of the trade-off with other criteria. The trails are primarily recreationally oriented, but they will also serve **commuting** needs because of the improved continuity and longer rides. And finally, safety has been addressed primarily through the separation of bicyclists and motorists.

In addition to these bike trail recommendations, the following **recommendations** are made:

- Railroad right-of-way should **always** be considered for possible bicycle and recreational trail uses.
- River corridor paths are favorable and should be **added** whenever possible.
- AASHTO Guidelines should be used in designing and constructing bicycle paths.

Roadway **Improvements**

Not all bicycling occurs on exclusive bike paths, nor can it ever be expected to. It would be far too expensive and unrealistic to build a separate system of bike **paths** and lanes that would satisfy the transportation needs of all bicyclists. It can be generally **assumed** that the street system will remain as the base system for bicycle travel. This is especially true for the experienced adult commuters who want to get to their destination in the fastest and most direct manner. These people generally feel quite safe and comfortable competing with motor vehicles.

For the experienced adult commuter cyclist, the following roadway improvements would probably help the **most**:

Bridges - Frequently, bridges are narrower than the approaching roadways and do not allow adequate room for bicyclists. All new bridges and those under major repair or renovation should be made wide enough to safely accommodate bicyclists or provide sidewalks on both sides that are accessible to both pedestrians and cyclists (curb cuts required) and are sufficiently wide or are separated in **some** way from motor vehicles (i.e., via railing). The current standard followed by engineers is to provide six-foot sidewalks on new or reconstructed bridges.

Wide Curb Lanes - An easy way to assist the bicyclist is to provide a wider right-hand lane. In this way, the motorist does not have to switch lanes to pass the bicyclist. To widen the right lane by two feet on both sides of the street would cost an estimated **\$100,000** per mile.

Shoulders - Wide, paved, smooth shoulders are excellent for bike riding in rural areas. The cost of providing a six-foot overlay on an existing gravel shoulder on both sides of the road is estimated at **\$22,000** per mile.

Pavement Surfaces - Rough pavement surfaces with cracks, potholes, humps, sharp drop-offs, etc. near the right edge of the street are a serious threat to the cyclist. The street surface at the right edge should be kept as smooth as possible.

Street Cleaning - Debris and broken glass at the edge of the street poses a serious problem to bicyclists, who **must** swerve to avoid the clutter or risk a flat tire or accident. Streets should be kept clean—all the way to the edge of the street.

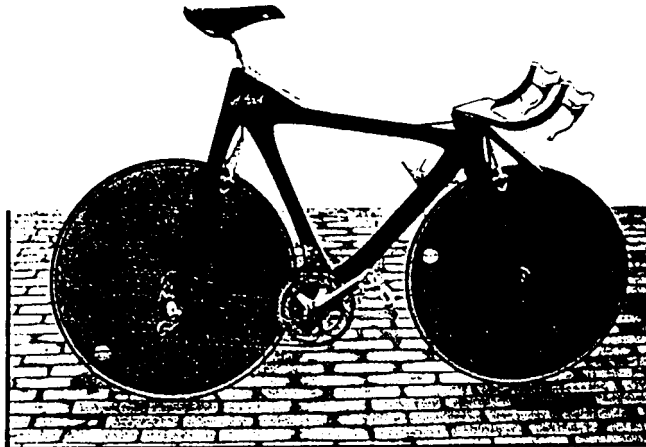
Drainage Grates - Parallel drainage grates can trap the front wheel of the bicycle and cause the cyclist to lose control. Drainage grates should be placed perpendicular to the curb or use curb inlets. It is the current practice of the City of Wichita to use grates that are bicycle safe.

Utility Covers - Utility covers should be **smooth** and flush with the surface and preferably not in the "path" of the cyclist. In Wichita, manhole covers in pavement are **mounted** flush; with unpaved streets, covers **may** be surrounded by a slight mound.

Sidewalks - Wide, smooth sidewalks with curb cuts along arterials and other roadways would help the novice cyclist. Bike riding on sidewalks, however, can cause problems, especially where they conflict with driveways or side streets. Extra painting or striping at these locations might help to alert and caution the cyclist, pedestrian and motorist. It is current City policy to provide four-foot sidewalks when arterial **streets** are constructed. To add an additional two feet to a sidewalk would cost an estimated **\$13,000** per mile.

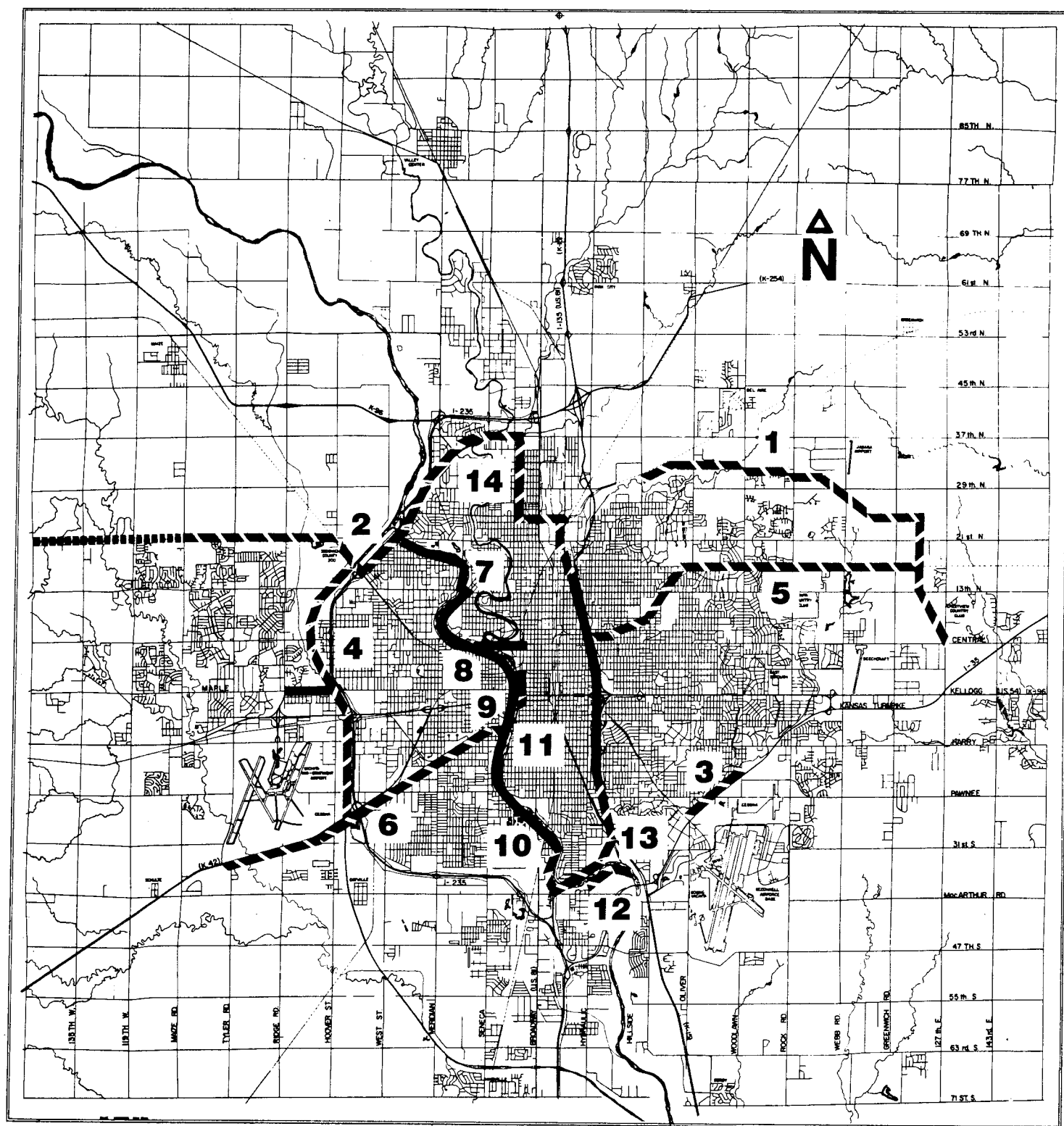
In general, bicyclists should be considered as legitimate **users** of the road and therefore their needs and safety should be taken into account **when** designing, building and reconstructing roads and bridges. Specific emphasis should be placed on projects that would provide continuity to the bikeway system. A **number** of streets are shown on the following **map** (Map 9) to be important to the establishment of a total bikeway network. **Some** of these streets are listed as projects in the current City and County Capital Improvement

Programs. As these roads are reconstructed, appropriate roadway improvements for bicycle use should be included as a part of the overall project. The end result is a system of exclusive bicycle paths with improved roadways serving as the connecting links.






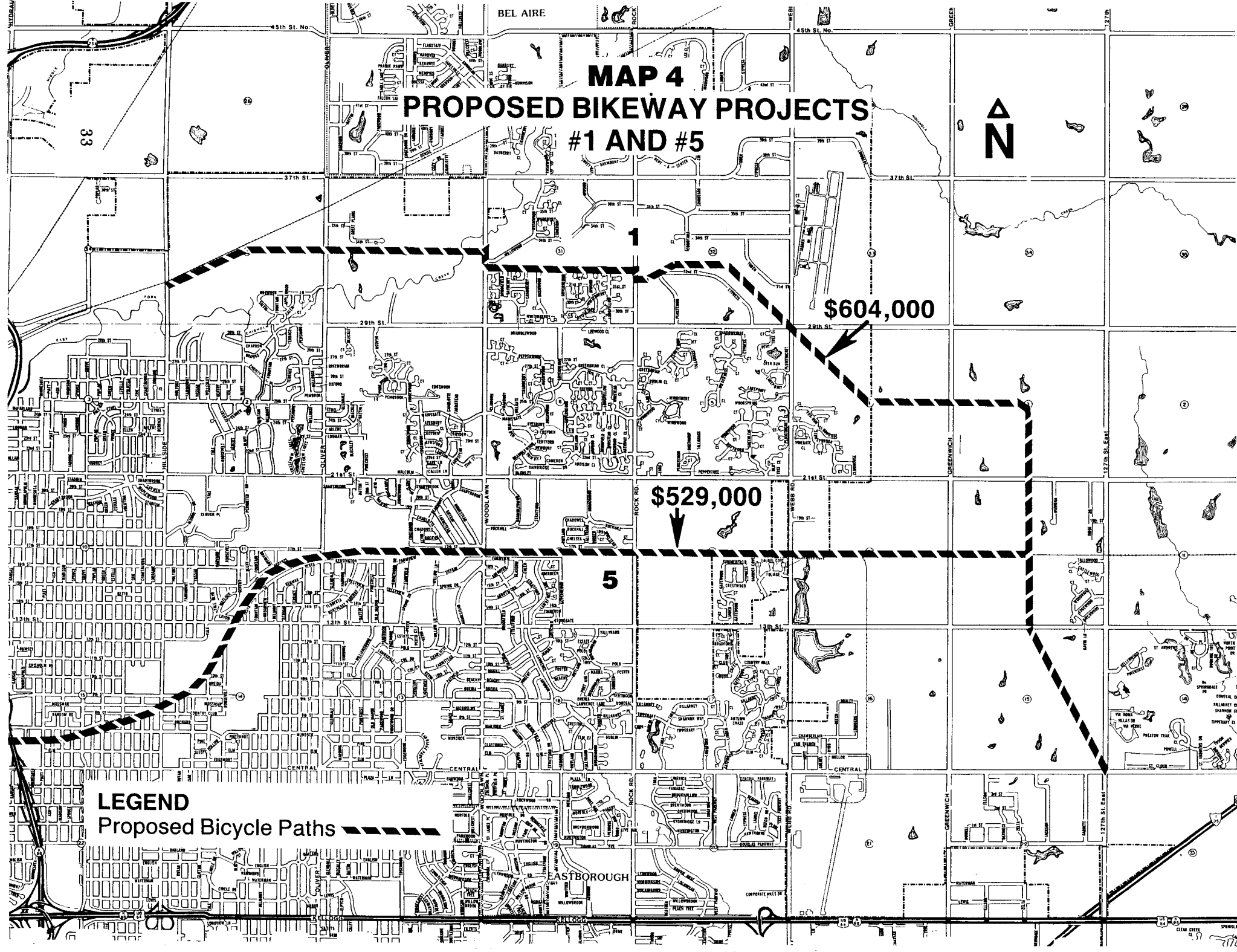
Carbon-Fiber Bike. *circa 1988*

#1 THRU #14



LEGEND

Existing Bicycle Paths 
Proposed Bicycle Paths 
Paved Shoulders 



MAP 4 PROPOSED BIKEWAY PROJECTS #1 AND #5

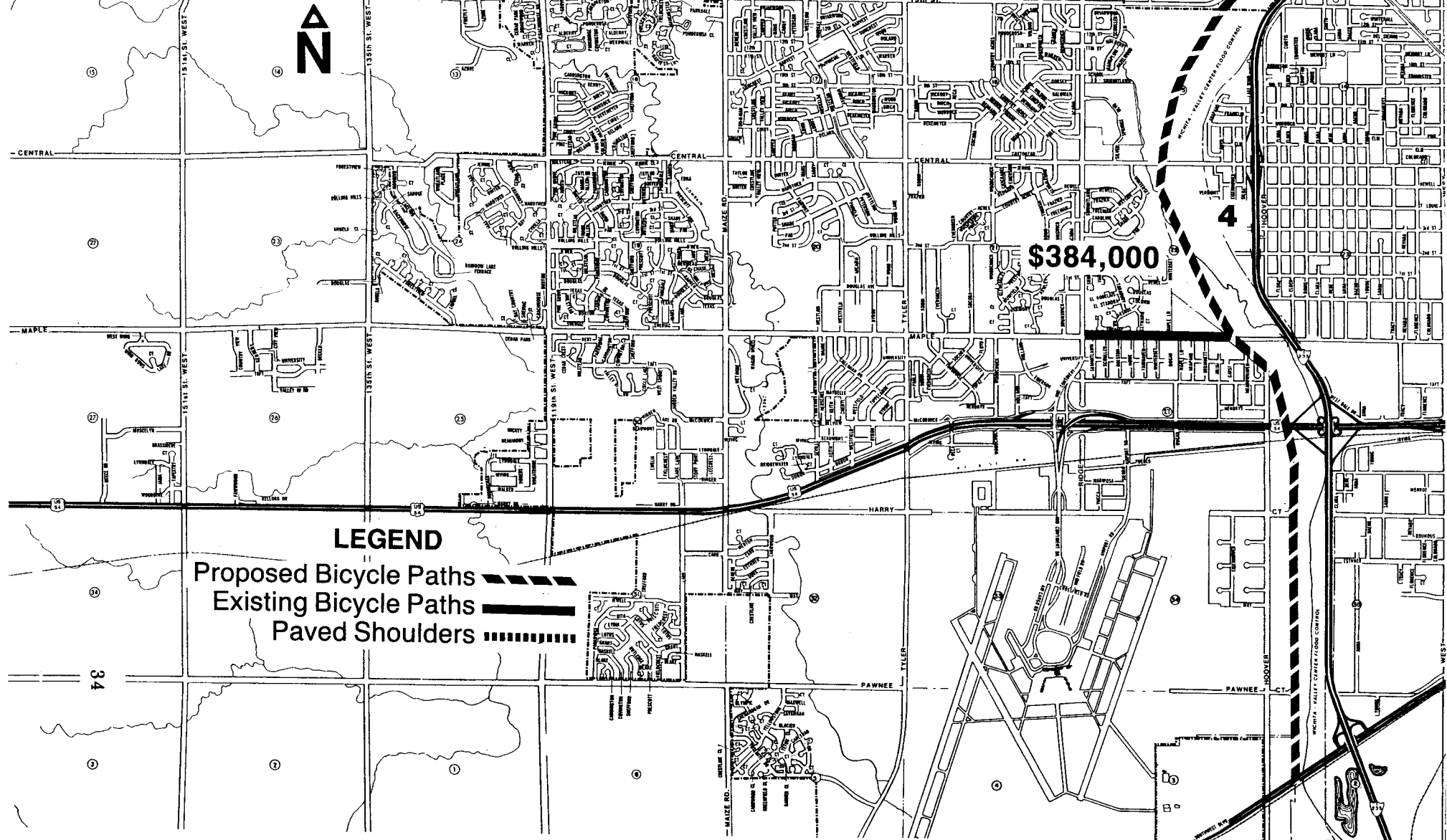


\$604,000

\$529,000

LEGEND
Proposed Bicycle Paths

MAP 5 PROPOSED BIKEWAY PROJECTS #2 AND #4



MAP 6 PROPOSED BIKEWAY PROJECT #3

\$141,000

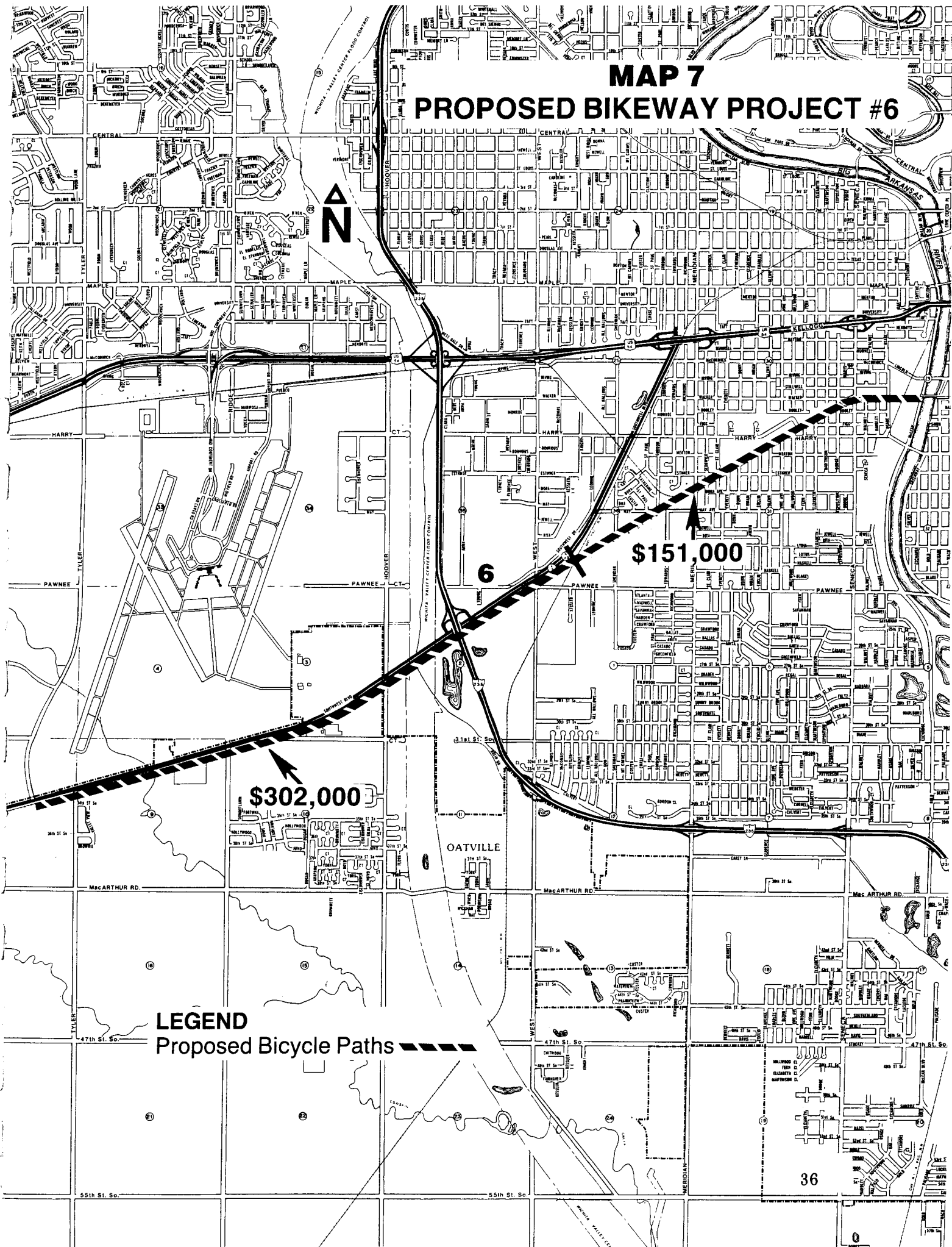
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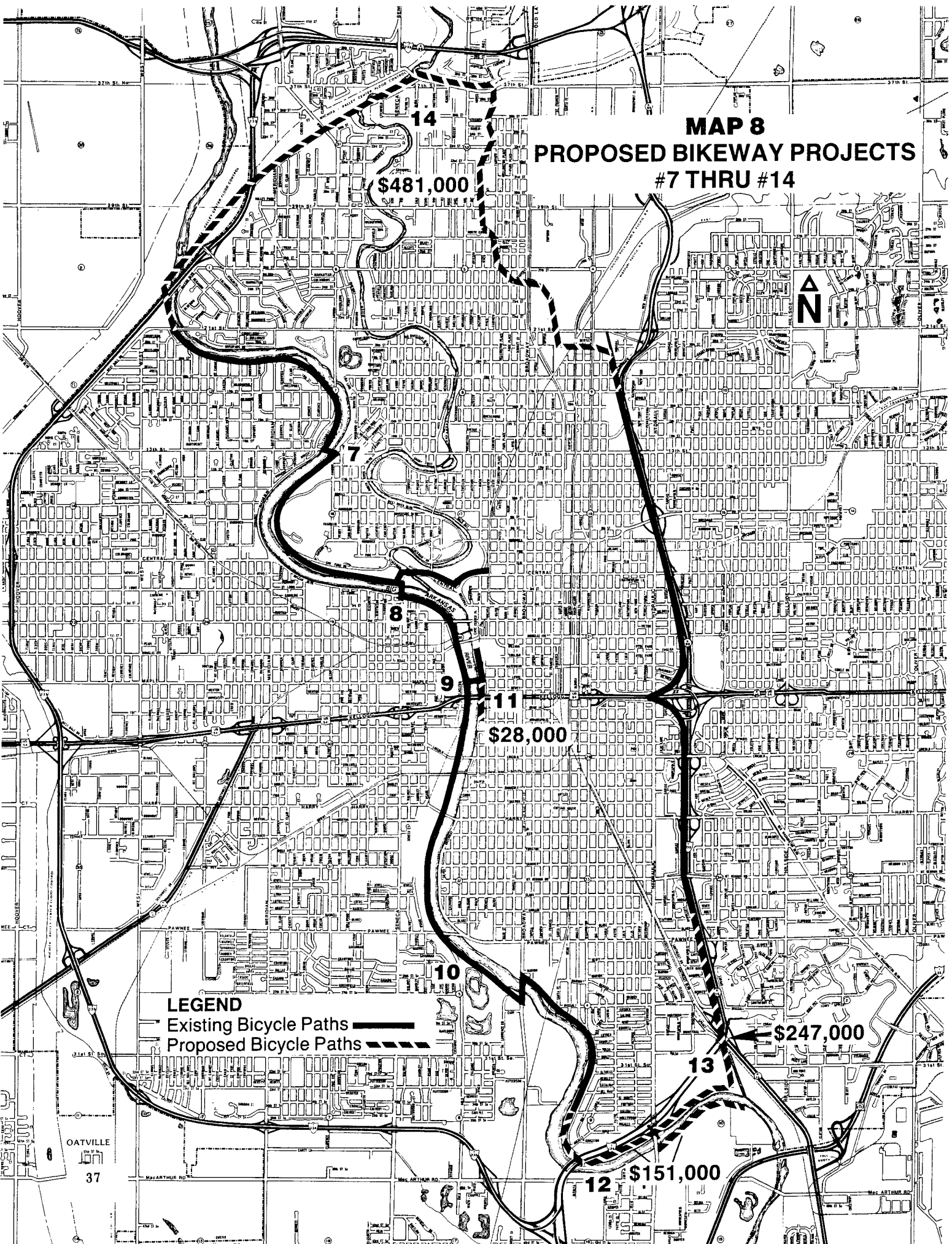
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Proposed Bicycle Paths 

MAP 7 PROPOSED BIKEWAY PROJECT #6



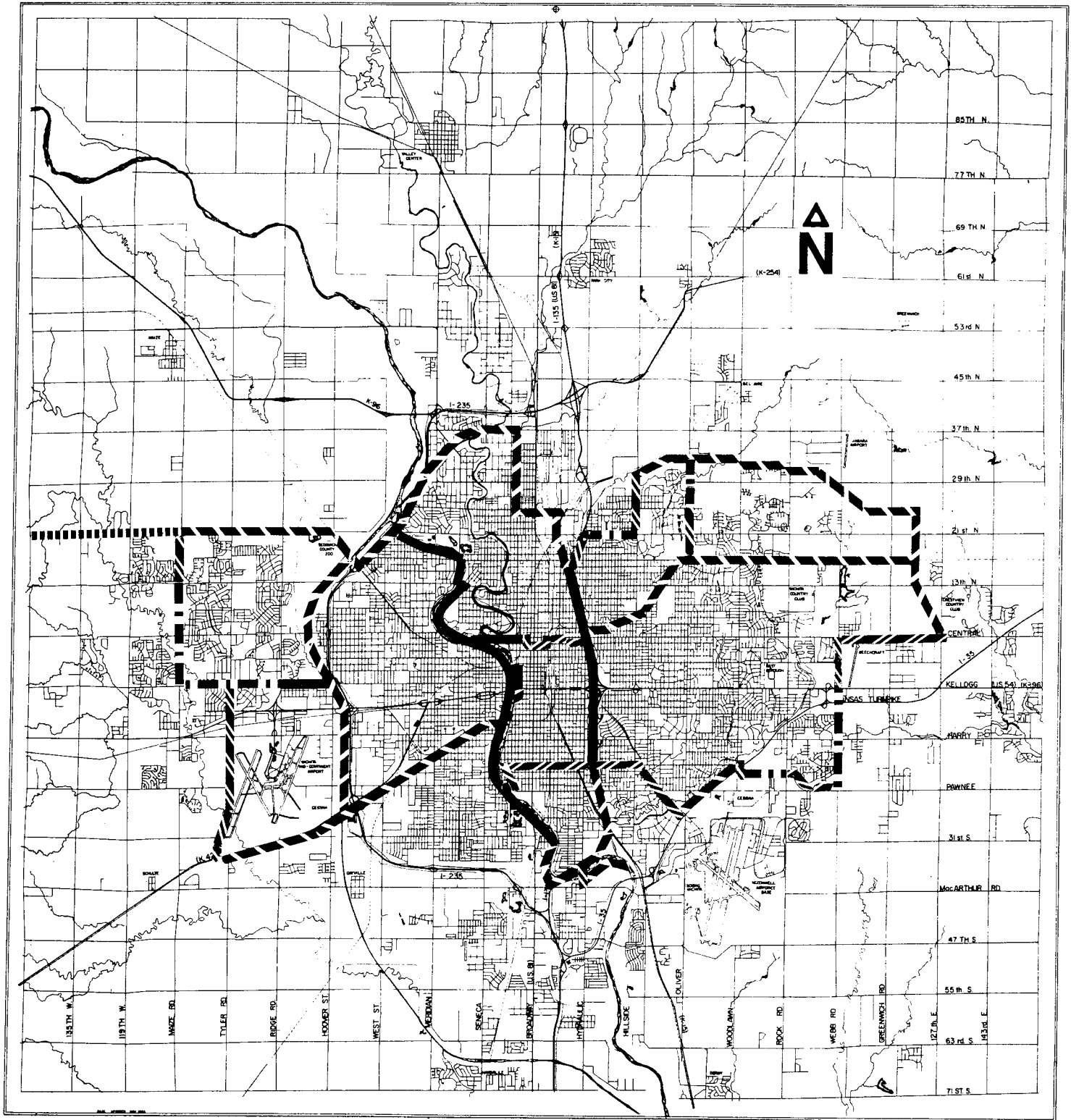
MAP 8
PROPOSED BIKEWAY PROJECTS
#7 THRU #14







LEGEND

- Existing Bicycle Paths ———
- Proposed Bicycle Paths - - - - -

MAP 9
PROPOSED BIKEWAY SYSTEM
(WITH CONNECTING ROAD IMPROVEMENTS)



LEGEND

Existing Bicycle Paths 
Proposed Bicycle Paths 
CIP Projects 
Possible Connections 
Paved Shoulders 